<center>**EXAMINER'S AMENDMENT**</center>

1.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

2.   Authorization for this examiner's amendment was given in a telephone interview with

Glen M. Kellett, Reg.# 60,202 and Shireen Bacon, Reg.#40,494 on 07/07//2010.

3.   This listing of claims will replace all prior versions and listings of claims in the

application:

    1.   (Currently Amended)   In a system that shares a performance monitoring unit

between multiple execution units, a method comprising:

        receiving a request from a execution unit of the multiple execution units to start or stop

performance monitoring operation of the execution unit;

        maintaining a correct sequence of requests to start and stop performance monitoring

operation by (i) ensuring each stop request corresponds to and follows a corresponding start

request for the same execution unit and (ii) ignoring any stop request that does not follow a

corresponding start request for the same execution unit;

performing arbitration to acquire exclusive execution for one of the multiple execution units based on predetermined criteria and in response to multiple requests to start and stop performance monitoring being received substantially simultaneously; and

in response to receiving a request to start performance monitoring operation, (i) allocating a request to start performance monitoring operation based on the correct sequence of requests[[;]], (ii) determining a total number of allocated requests to start performance monitoring operation[[;]], and (iii) initiating performance monitoring operation; and

in response to receiving a request to stop performance monitoring operation, (i) removing a request to start performance monitoring operation by indicating to the system that no request to start performance monitoring operation is pending for the current execution unit[[;]], (ii) determining an active mode of performance monitoring operation[[;]], and (iii) completing performance monitoring operation.

2.   (Cancelled)

3.   (Original) The method of claim 1, wherein allocating the request comprises indicating to the system that a request to start performance monitoring operation is pending for a specific execution unit.

4-6.   (Cancelled)

7.   (Original) The method of claim 1, wherein initiating performance monitoring operation comprises programming the performance monitoring unit to start collecting performance data for the execution unit that requested said operation if no other request was previously allocated.

8.   (Original) The method of claim 7, further comprising at least one of setting an initial performance value to the current value of performance monitoring unit counter and setting the initial performance value and the performance monitoring unit counter to a predefined value.

9.   (Previously Presented) The method of claim 1, wherein initiating performance monitoring operation further comprises programming the performance monitoring unit to start collecting performance data for the execution unit that requested said operation, in addition to collecting performance data of other execution units of the multiple execution units that previously requested said operation if there are other requests previously allocated.

10.   (Original) The method of claim 1, wherein determining the active mode of performance monitoring operation comprises detecting whether programming of performance monitoring unit was performed for the execution unit that requested to stop performance monitoring operation.

11.   (Original) The method of claim 1, wherein completing performance monitoring operation comprises retrieving final performance data and programming the performance

monitoring unit to stop collecting of performance data if no other requests for the performance monitoring unit are allocated.

12.   (Previously Presented) The method of claim 1, wherein completing performance monitoring operation further comprises programming the performance monitoring unit to stop collecting performance data for the execution unit that requested said operation in response to a stop request from the execution unit, if there are other requests previously allocated and the performance monitoring unit was in active mode for the execution unit.

13.   (Original)   The method of claim 12, further comprising retrieving current performance data, setting the initial performance value equal to the value retrieved or reprogramming the performance monitoring unit to start counting from a predefined value and setting the initial performance value equal to the predefined value.

14.   (Original)   The method of claim 12, further comprising: selecting another execution unit; programming the performance monitoring unit to start collecting performance data for the selected execution unit.

15.   (Original) The method of claim 14, wherein selecting another execution unit comprises selecting, by external means, of a request previously allocated by another execution unit and determining the execution unit that allocated said request.

16.   (Original)   The method of claim 14, wherein programming the performance monitoring unit further comprises enabling performance data collection for the selected execution unit in addition to performance data of other execution units which previously requested said operation.

17.   (Currently Amended) An article comprising: ~~a non-transitive, machine accessible~~ <u>storage</u> medium having a plurality of machine readable instructions, wherein when the instructions are executed by a processor, the instructions provide for sharing of a performance monitoring unit between multiple execution units by:

receiving a request from an execution unit of the multiple execution units to start or stop performance monitoring operation of the execution unit;

maintaining a correct sequence of requests to start and stop performance monitoring operation by <u>(i)</u> ensuring each stop request corresponds to and follows a corresponding start request for the same execution unit <u>and (ii) ignoring any stop request that does not follow a corresponding start request for the same execution unit</u>;

performing arbitration to acquire exclusive execution for one of the multiple execution units based on predetermined criteria and in response to multiple requests to start and stop performance monitoring being received substantially simultaneously; <u>and</u>

<u>in response to receiving a request to start performance monitoring operation, (i)</u> allocating a request to start performance monitoring operation based on the correct sequence of requests[[;]]<u>, (ii)</u> determining a total number of allocated requests to start performance monitoring operation[[;]]<u>, and (iii)</u> initiating performance monitoring operation; <u>and</u>

in response to receiving a request to stop performance monitoring operation, (i) removing a request to start performance monitoring operation by indicating to the system that no request to start performance monitoring operation is pending for the current execution unit[[;]], (ii) determining an active mode of performance monitoring operation[[;]], and (iii) completing performance monitoring operation.

18.   (Cancelled)

19.   (Original) The article of claim 17, wherein instructions for allocating the request comprise instructions for indicating to the system that a request to start performance monitoring operation is pending for a specific execution unit.

20-22. (Cancelled)

23.   (Original) The article of claim 17, wherein instructions for initiating performance monitoring operation comprise instructions for programming the performance monitoring unit to start collecting performance data for the execution unit that requested said operation if no other request was previously allocated.

24.   (Original) The article of claim 23, further comprising instructions for at least one of setting an initial performance value to the current value of a performance monitoring unit

counter and setting the initial performance value and the performance monitoring unit counter to a predefined value.

25.   (Original)   The article of claim 17, wherein instructions for initiating of performance monitoring operation further comprise instructions for programming the performance monitoring unit to start collecting performance data for the execution unit that requested said operation, in addition to performance data of other execution units which previously requested said operation if there are other requests previously allocated.

26.   (Original) The article of claim 17, wherein instructions for determining the active mode of performance monitoring operation comprise instructions for detecting whether programming of performance monitoring unit was performed for the execution unit that requested to stop performance monitoring operation.

27.   (Original)   The article of claim 17, wherein instructions for completing performance monitoring operation comprise instructions for retrieving final performance data and programming the performance monitoring unit to stop collecting of performance data if no other requests for the performance monitoring unit are allocated.

28.   (Previously Presented)   The article of claim 17, wherein instructions for completing performance monitoring operation further comprise instructions for programming the performance monitoring unit to stop collecting of performance data for the execution unit that

requested said operation in response to a stop request from the execution unit, if there are other requests previously allocated and the performance monitoring unit was in active mode for the current execution unit.

29.   (Original) The article of claim 28, further comprising instructions for retrieving current performance data, setting the initial performance value equal to the value retrieved or reprogramming performance monitoring unit to start counting from a predefined value and setting the initial performance value equal to the predefined value.

30.   (Original) The article of claim 28, further comprising instructions for: selecting another execution unit; programming the performance monitoring unit to start collecting of performance data for the selected execution unit.

31.   (Original) The article of claim 30, wherein instructions for selecting another execution unit comprise instructions for selecting, by external means, of a request previously allocated by another execution unit and determining the execution unit that allocated said request.

32.   (Original) The article of claim 30, wherein instructions for programming the performance monitoring unit further comprise instructions for enabling performance data collection for the selected execution unit in addition to performance data of other execution units which previously requested said operation.

33.   (Currently Amended)   A system that shares a performance monitoring unit between multiple execution units comprising:

a processor; and

a memory device communicatively coupled to the processor, the memory device having stored therein a plurality of instructions that, when executed by the processor, cause the processor to:

receive a request from an execution unit of the multiple execution units to start or stop performance monitoring operation of the execution unit;

maintain a correct sequence of requests to start or stop performance monitoring operation by (i) ensuring each stop request corresponds to and follows a corresponding start request for the same execution unit and (ii) ignoring any stop request that does not follow a corresponding start request for the same execution unit;

perform arbitration to acquire exclusive execution for one of the multiple execution units based on predetermined criteria and in response to multiple requests to start and stop performance monitoring being received substantially simultaneously; and

in response to receiving a request to start performance monitoring operation, (i) allocate a request to start performance monitoring operation based on the correct sequence of requests[[;]], (ii) determine a total number of allocated requests to start performance monitoring operation[[;]], and (iii) initiate performance monitoring operation; and

in response to receiving a request to stop performance monitoring operation, (i) remove a request to start performance monitoring operation by indicating to the system that no request to start performance monitoring operation is pending for the current execution unit[[;]], (ii)

determine an active mode of performance monitoring operation[[;]], and (iii) complete performance monitoring operation.

34.   (Cancelled)

35.   (Previously Presented) The system of claim 33, wherein to allocate the request comprises to indicate to the system that a request to start performance monitoring operation is pending for a specific execution unit .

36-38. (Cancelled)

39.   (Previously Presented) The system of claim 33, wherein to initiate performance monitoring operation comprises to program the performance monitoring unit to start collecting performance data for the execution unit that requested said operation if no other request was previously allocated.

40.   (Previously Presented) The system of claim 39, further comprising to at least one of set an initial performance value to the current value of a performance monitoring unit counter and set the initial performance value and the performance monitoring unit counter to a predefined value.

41.   (Previously Presented) The system of claim 33, wherein to initiate performance monitoring operation further comprises to program the performance monitoring unit to start collecting performance data for the execution unit that requested said operation, in addition to performance data of other execution units which previously requested said operation if there are other requests previously allocated.

42.   (Previously Presented) The system of claim 33, wherein to determine the active mode of performance monitoring operation comprises to detect whether programming of performance monitoring unit was performed for the execution unit that requested to stop performance monitoring operation.

43.   (Previously Presented) The system of claim 33, wherein to complete performance monitoring operation comprises to retrieve final performance data and to program the performance monitoring unit to stop collecting of performance data if no other requests for the performance monitoring unit are allocated.

44.   (Previously Presented) The system of claim 33, wherein to complete performance monitoring operation further comprises to program the performance monitoring unit to stop collecting performance data for the execution unit that requested said operation in response to a stop request from the execution unit, if there are other requests previously allocated and the performance monitoring unit was in the active mode for the current execution unit.

45.   (Previously Presented)   The system of claim 44, wherein the plurality of instruction further cause the processor to retrieve current performance data, to set the initial performance value equal to the value retrieved or to reprogram performance monitoring unit to start counting from a predefined value and set the initial performance value equal to the predefined value.

46.   (Currently Amended) The system of claim 44, wherein the plurality of instruction further cause the processor to select another execution unit[[;]] and to program the performance monitoring unit to start collecting performance data for the selected execution unit.

47.   (Previously Presented)   The system of claim 46, wherein to select another execution unit comprises to select, by external means, a request previously allocated by another execution unit and to determine the execution unit that allocated said request.

48.   (Previously Presented)   The system of claim 46, wherein to program the performance monitoring unit further comprises to enable performance data collection for the selected execution unit in addition to performance data of other execution units which previously requested said operation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH AL KAWSAR whose telephone number is (571)270-3169. The examiner can normally be reached on 7:30am to 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai T. An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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